DC-8 11/14/16

Aircraft:
DC-8 (See full schedule)
Flight Number:
1160
Payload Configuration:
OIB-ATM NAV/ATM GPS/ATM-T5/T6/ATM FLIR/ATM CAMBOT MCoRDS/SNOW/Ku RADAR DMS/POS-AV GRAVIMETER & ARMAS (piggyback)
Nav Data Collected:
Yes
Total Flight Time:
10.9 hours
Submitted by:
Timothy Moes on 11/17/16
Flight Segments:

From:	SSCI - Punta Arenas	**To:**	SSCI - Punta Arenas
Start:	11/14/16 12:50 Z	**Finish:**	11/14/16 23:42 Z
Flight Time:	10.9 hours		
Log Number:	178010	**PI:**	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	Spectacular Flight. Very scenic South Peninsula mission. Ramp pass @ 2000? AGL @ 125900Z. Covered 4 major glaciers ? Starting with the Maintland, then Lurabee, Clifford and Fleming. All science instruments recorded good data with very minimal cloud interference. A/C had two squawks ---1) #3 Oil Pressure indicator was fluctuating during transit back home; 2) Groundspeed indicator in cockpit was inop. Nothing reported to be grounding.		

Flight Hour Summary:

	178010
Flight Hours Approved in SOFRS	300
Total Used	306.9
Total Remaining	-6.9

178010 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
10/04/16	1135	Science	4	4	296
10/05/16	1136	Science	2.7	6.7	293.3
10/12/16	1138	Transit	10.9	17.6	282.4
10/12/16	1139	Transit	3	20.6	279.4
10/14/16 - 10/15/16	1140	Science	10.9	31.5	268.5
10/15/16 - 10/16/16	1141	Science	11.8	43.3	256.7
10/17/16 - 10/18/16	1142	Science	11.8	55.1	244.9
10/20/16 - 10/21/16	1143	Science	11.4	66.5	233.5
10/22/16	1144	Science	11	77.5	222.5
10/24/16 - 10/25/16	1145	Science	11.5	89	211
10/25/16 - 10/26/16	1146	Science	11.3	100.3	199.7
10/26/16 - 10/27/16	1147	Science	12.1	112.4	187.6
10/27/16 - 10/28/16	1148	Science	11.5	123.9	176.1
10/28/16 - 10/29/16	1149	Science	11	134.9	165.1
10/31/16 - 11/01/16	1150	Science	11	145.9	154.1
11/02/16 - 11/03/16	1151	Science	11.2	157.1	142.9
11/03/16 - 11/04/16	1152	Science	11.5	168.6	131.4
11/04/16 - 11/05/16	1153	Science	11.1	179.7	120.3

11/05/16 - 11/06/16	1154	Science	11.7	191.4	108.6
11/07/16 - 11/08/16	1155	Science	11.2	202.6	97.4
11/09/16 - 11/10/16	1156	Science	11.7	214.3	85.7
11/10/16	1157	Science	10.9	225.2	74.8
11/11/16 - 11/12/16	1158	Science	11.3	236.5	63.5
11/12/16 - 11/13/16	1159	Science	11.1	247.6	52.4
11/14/16	1160	Science	10.9	258.5	41.5
11/15/16 - 11/16/16	1161	Science	11.6	270.1	29.9
11/17/16 - 11/18/16	1162	Science	11.1	281.2	18.8
11/18/16 - 11/19/16	1163	Science	11.1	292.3	7.7
11/21/16	1165	Transit	11.6	303.9	-3.9
11/21/16	1164	Transit	3	306.9	-6.9

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

Related Science Report:

OIB - DC-8 11/14/16 Science Report

Mission:
OIB
Mission Summary:

Mission: South Peninsula (priority: baseline)

This is primarily a repeat flight, designed to assess dh/dt of four glaciers draining the Dyer Plateau: Fleming, Maitland, Lurabee, and Clifford. We also refly a portion of the grounding line along the George VI Ice Shelf, which was last flown in 2011. Finally we continue the grid uphill from the grounding line on the west side, with grid lines spaced at 20 km. This grid is intended to assess dh/dt in this area, and on its south end it connects with a similarly-designed grid in the English Coast 03 flight. The Fleming Glacier lines in this mission are supplemented by a 10 km grid over Fleming in the Alexander-Fleming flight.

An easier decision today to select this baseline mission, with a consistent forecast across the board. Indeed, clouds only appeared at the very beginning of the first centerline track along Maitland Glacier, compromising ATM/FLIR/CAMBOT/DMS for ~12 min, but were absent thereafter. The flight proceeded well and uneventfully over the Dyer Plateau, with fantastic views of various nunataks and passes over notches on the grounding-line track. We also passed over the remnants of the Wordie Ice Shelf below Fleming Glacier. Most of the spectrum of possible grounded-to-floating ice transitions were surveyed. A member of the DC-8 crew declared it his best day of work ever.

All instruments performed well. 97% data collection for ATM T6.

We conducted a ramp pass at 2000' on departure from PUQ.

Attached images are:
1. Map of today's flight
2. Mt. Balfour, which splits the lower reaches Fleming Glacier, with tidewater glacier terminus in the foreground (NASA / Joe MacGregor)
3. Pyramidal nunataks on the Dyer Plateau (SGL / Andrew Palmer)

4. The Feature 1: Unusual blue ice exposures next to and on a broad rock ridge, beneath a sharper ridgeline, Palmer Land (SGL / Andrew Palmer)
5. The Feature 2: Zoom-in on the blue ice exposures on rock ridge, possibly filling in subglacially quarried cavities (SGL / Andrew Palmer)
6. ATM T6 swath map of crevassing (NASA WFF ATM / Jim Yungel)
7. MCoRDS data collection showing significant subglacial relief associated with Dyer Plateau pyramidal nunataks (KU CReSIS / Carl Leuschen)

Images:

Map of today's flight

Read more

Mt. Balfour, which splits the lower reaches Fleming Glacier, with

Read more

Pyramidal nunataks on the Dyer Plateau

Read more

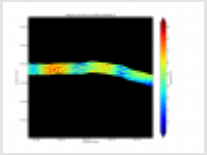
The Feature 1: Unusual blue ice exposures next to and on a broad

Read more

The Feature 2: Zoom-in on the blue ice exposures on rock ridge,

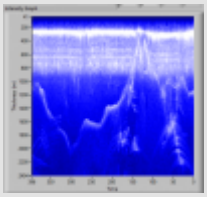
Read more

ATM T6 swath map of crevassing



Read more

MCoRDS data collection showing significant subglacial relief



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Submitted by:
Joseph MacGregor on 11/19/16